

AMENDMENTS TO THE CLAIMS:

1-67. (canceled)

68. (currently amended) A skin treatment method comprising periodically applying, in temporally spaced treatment sessions, pulses of electromagnetic radiation to a skin surface of an individual to at least reduce the incidence or likelihood of short-term or long-term non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma caused by exposure of the individual to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface in each of said treatment sessions being effectuated prior to, during or after the exposure of the individual to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface ~~being effectuated in the absence of any visible damage from ultraviolet or Xray radiation along said skin surface~~ increasing the local temperature in skin structures including blood vessel cell walls and keratinocytes in the skin to stimulate a healing response and a release of growth factors and other tissue substances, without permanently damaging the skin structures, said pulses of electromagnetic radiation being characterized by parameters including pulse duration of less than about 2 seconds, wavelength and total energy so selected that the applying of said electromagnetic radiation promotes healthy skin and generates no visible damage such as tanning.

69-72. (canceled)

73. (currently amended) A skin treatment method comprising applying an effective amount of pulsed electromagnetic radiation to a skin surface to at least reduce the incidence or likelihood of short-term or long-term non-cancerous visible damage to the skin including

radiation dermatitis, sunburns, and poikiloderma caused by exposure to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface being effectuated on at least one occasion prior to, during or after the exposure of the individual to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface ~~being effectuated in the absence of any visible damage from ultraviolet or Xray radiation along said skin surface~~ increasing the local temperature in skin structures including blood vessel cell walls and keratinocytes in the skin to stimulate a healing response and a release of growth factors and other tissue substances, without permanently damaging the skin structures, the applying of said electromagnetic radiation to said skin surface being effectuated within a predetermined interval of the exposure of said skin surface to Xray or ultraviolet radiation, the applying of said electromagnetic radiation including applying electromagnetic radiation more frequently to said skin surface with increasing frequency or intensity of exposure of said skin surface to Xray or ultraviolet radiation, said electromagnetic radiation being applied to said skin surface in pulses each of less than about 2 seconds duration.

74. (previously presented) The method defined in claim 73 wherein said predetermined interval begins prior to the exposure of the individual to Xray or ultraviolet radiation.

75. (previously presented) The method defined in claim 73 wherein said predetermined interval begins upon the exposure of said skin surface to Xray or ultraviolet radiation.

76. (previously presented) The method defined in claim 73 wherein said predetermined interval is approximately zero, the application of electromagnetic radiation to said skin surface occurring during exposure of said skin surface to Xray or ultraviolet radiation.

77. (previously presented) The method defined in claim 73 wherein said skin surface is not directly exposed to said source of Xray or ultraviolet radiation.

78-85. (canceled)

86. (currently amended) The method defined in claim 68, further comprising directly exposing a skin area other than said skin surface ~~indirectly~~ to said source of Xray or ultraviolet radiation, said skin surface not being exposed to said source of Xray or ultraviolet radiation.

87-93. (canceled)

94. (previously presented) The method defined in claim 68 wherein said treatment sessions increase in number with increasing frequency or intensity of exposure of said skin surface to UV or Xray radiation.

95. (previously presented) The method defined in claim 94, further comprising applying an exogenous chromophore to said skin surface in a plurality of said treatment sessions prior to the applying of said electromagnetic radiation to said skin surface.

96-104. (canceled)

105. (new) The method defined in claim 68, further comprising transmitting mechanical wave energy into biological tissues along said skin surface prior to, during or after the applying of said electromagnetic radiation to said skin surface.

106. (new) The method defined in claim 68, further comprising applying a magnetic field to biological tissues along said skin surface prior to, during or after the applying of said electromagnetic radiation to said skin surface.

107. (new) The method defined in claim 68, further comprising providing an exogenous chromophore in tissues along said skin surface prior to the applying of said electromagnetic radiation to said skin surface in one or more treatment sessions.

108. (new) The method defined in claim 107 wherein said exogenous chromophore is porphyrin.

109. (new) A skin treatment method comprising periodically applying, in temporally spaced treatment sessions, electromagnetic radiation to a skin surface of an individual to at least reduce the incidence or likelihood of short-term or long-term non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma caused by exposure of the individual to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface in each of said treatment sessions being effectuated prior to, during or after the exposure of the individual to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface increasing the local temperature in skin structures including blood vessel cell walls and keratinocytes in the skin to stimulate a healing response and a release of growth factors and other tissue substances, without permanently damaging the skin structures,

said electromagnetic radiation being characterized by parameters including pulse duration, wavelength and total energy so selected that the applying of said electromagnetic radiation promotes healthy skin and generates no visible damage such as tanning, said electromagnetic radiation being broadband radiation including visible wavelengths as well as infrared wavelengths, between 400 nm and 1200 nm.

110. (new) A skin treatment method comprising periodically applying, in temporally spaced treatment sessions, electromagnetic radiation to a skin surface of an individual to at least reduce the incidence or likelihood of short-term or long-term non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma caused by exposure of the individual to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface in each of said treatment sessions being effectuated prior to, during or after the exposure of the individual to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface increasing the local temperature in skin structures including blood vessel cell walls and keratinocytes in the skin to stimulate a healing response and a release of growth factors and other tissue substances, without permanently damaging the skin structures, said electromagnetic radiation being characterized by parameters including pulse duration, wavelength and total energy so selected that the applying of said electromagnetic radiation promotes healthy skin and generates no visible damage such as tanning, said electromagnetic radiation including one or more single or isolated wavelengths.

111. (new) The method defined in claim 110, wherein said electromagnetic radiation consists essentially of said one or more single or isolated wavelengths.

112. (new) A skin treatment method comprising periodically applying, in temporally spaced treatment sessions, electromagnetic radiation to a skin surface of an individual to at least reduce the incidence or likelihood of short-term or long-term non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma caused by exposure of the individual to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface in each of said treatment sessions being effectuated during or after the exposure of the individual to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface increasing the local temperature in skin structures including blood vessel cell walls and keratinocytes in the skin to stimulate a healing response and a release of growth factors and other tissue substances, without permanently damaging the skin structures, said electromagnetic radiation being characterized by parameters including pulse duration, wavelength and total energy so selected that the applying of said electromagnetic radiation promotes healthy skin and generates no visible damage such as tanning.

113. (new) A skin treatment method comprising periodically applying, in temporally spaced treatment sessions, electromagnetic radiation to a skin surface of an individual to at least reduce the incidence or likelihood of short-term or long-term non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma caused by exposure of the individual to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface in each of said treatment sessions being effectuated prior to, during or after the exposure of the individual to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface increasing the local temperature in skin structures including blood vessel cell walls and keratinocytes in the skin to stimulate a healing response and a release of growth factors and other tissue substances, without permanently damaging the skin structures, said electromagnetic radiation being characterized by parameters including pulse duration,

wavelength and total energy so selected that the applying of said electromagnetic radiation promotes healthy skin and generates no visible damage such as tanning, further comprising providing an exogenous chromophore in tissues along said skin surface prior to the applying of said electromagnetic radiation to said skin surface in at least one treatment session.

114. (new) The method defined in claim 113 wherein said exogenous chromophore is porphyrin.

115. (new) A skin treatment method comprising periodically applying, in temporally spaced treatment sessions, electromagnetic radiation to a skin surface of an individual to at least reduce the incidence or likelihood of short-term or long-term non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma caused by exposure of the individual to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface in each of said treatment sessions being effectuated prior to, during or after the exposure of the individual to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface increasing the local temperature in skin structures including blood vessel cell walls and keratinocytes in the skin to stimulate a healing response and a release of growth factors and other tissue substances, without permanently damaging the skin structures, said electromagnetic radiation being characterized by parameters including pulse duration, wavelength and total energy so selected that the applying of said electromagnetic radiation promotes healthy skin and generates no visible damage such as tanning, further comprising transmitting an additional form of wave energy into biological tissues along said skin surface prior to, during or after the applying of said electromagnetic radiation to said skin surface, said additional form of wave energy being taken from the group consisting of mechanical wave energy and magnetic field wave energy.

116. (new) A skin treatment method comprising periodically applying, in temporally spaced treatment sessions, electromagnetic radiation to a skin surface of an individual to at least reduce the incidence or likelihood of radiation dermatitis caused by exposure of the individual to Xray radiation, the applying of said electromagnetic radiation to said skin surface in each of said treatment sessions being effectuated prior to, during or after the exposure of the individual to Xray radiation, the applying of said electromagnetic radiation to said skin surface increasing the local temperature in skin structures including blood vessel cell walls and keratinocytes in the skin to stimulate a healing response and a release of growth factors and other tissue substances, without permanently damaging the skin structures, said electromagnetic radiation being characterized by parameters including pulse duration, wavelength and total energy so selected that the applying of said electromagnetic radiation promotes healthy skin and generates no visible damage such as tanning.

117. (new) A skin treatment method comprising periodically applying, in temporally spaced treatment sessions, electromagnetic radiation to a skin surface of an individual to at least reduce the incidence or likelihood of short-term or long-term non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma caused by exposure of the individual to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface in each of said treatment sessions being effectuated prior to, during or after the exposure of the individual to Xray radiation, the applying of said electromagnetic radiation to said skin surface increasing the local temperature in skin structures including blood vessel cell walls and keratinocytes in the skin to stimulate a healing response and a release of growth factors and other tissue substances, without permanently damaging the skin structures, said electromagnetic radiation being characterized by parameters including pulse duration,



wavelength and total energy so selected that the electromagnetic radiation is absorbed by melanin in the epidermis and hemoglobin in the capillaries and blood vessels of the dermis, increasing heat of melanin, blood vessel walls, keratinocytes, collagen and Langerhans cells, to promote healing, collagen synthesis and remodeling and reduce the likelihood of occurrence of at least one kind of potential non-cancerous visible skin damage taken from the group consisting of radiation burns, sunburns, chronic redness, chronic scaling and dry skin, hypopigmentation, hyperpigmentation, atrophy, thinning, edema, swelling, fine blood vessel prominence, wrinkles and scarring.

118. (new) A skin treatment method comprising periodically applying, in temporally spaced treatment sessions, electromagnetic radiation to a skin surface of an individual to at least reduce the incidence or likelihood of short-term or long-term non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma caused by exposure of the individual to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface in each of said treatment sessions being effectuated prior to, during or after the exposure of the individual to Xray radiation, the applying of said electromagnetic radiation to said skin surface increasing the local temperature in skin structures including blood vessel cell walls and keratinocytes in the skin to stimulate a healing response and a release of growth factors and other tissue substances, without permanently damaging the skin structures, said electromagnetic radiation being characterized by parameters including pulse duration, wavelength and total energy so selected that the applying of said electromagnetic radiation promotes healthy skin and generates no visible damage such as tanning, the electromagnetic radiation having wavelengths limited to a band taken from the group consisting of between 400 nm and 550 nm and between 700 nm and 900 nm.